

## CLAIMS

1. Process for monitoring the quality of service of a communication through a communication  
5 network, said process being executed in a end-user terminal and comprising the steps of:
  - establishing a session between a first end-user terminal and a second end-user terminal via a signaling plane using a session initiation protocol;
  - monitoring the quality of service of the communication during said session;
  - transmitting information representative of said quality of service during said session using said  
10 signaling plane, wherein the QoS information is transmitted within the header of a session initiation protocol message, so that all parties share the same information.
2. A process according to claim 1 wherein said information representative of said quality of  
15 service comprises signaling parameters and media transmission quality parameters.
3. A process according to claim 2 wherein said session is used for transmitting voice services  
through at least a first and a second proxy and that said signaling parameters include a parameter  
representative of the time taken between one invite is transmitted to said first proxy and said proxy  
forwards it to said second proxy.  
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4. A process according to claim 1 wherein said signaling parameters include a parameter  
which is representative of the time between one invite and the resulting ringing signal for this  
invite.
- 25 5. A process according to claim 1 wherein said session is used for transmitting voice services  
and that said quality of service comprises parameters representative of the quality of transmission  
of voice signals.
6. A process according to claim 1 wherein the voice is transmitted through RTP and RTCP  
30 protocols and that said quality of service comprises parameters extracted from said RTCP protocol  
by an end-user process.
7. Process according to claim 4 wherein said quality of service comprises parameters  
representative of the jitter of the voice transmission.  
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8. Process according to claim 4 wherein said quality of service comprises parameters representative of the loss of packets in the voice transmission.
9. Process according to claim 1 wherein said session is used for transmitting video services  
5 and that said quality of service comprises parameters representative of the quality of transmission of video signals.
10. Process according to claim 1 wherein said first end-user communicates with a service in lieu of a second end-user.
- 10 11. Process according to claim 1 wherein said terminal is one of a personal computer, a Personal Document Assistant, a portable computer, a cellular telephone, a fixed telephone or a Universal Mobile Telecommunications System terminal.
- 15 13. Process for monitoring the quality of service of a communication through a communication network, said process being executed in a session endpoint and comprising the steps of:
- establishing a session between a first session endpoint and a second session endpoint via a signaling plane;
  - measuring at at least one of the session endpoints the quality of service of the communication  
20 and/or the related signalling;
  - transmitting QoS information representative of said measured quality of service in the header of the messages used in set-up or teardown of the session, so that all parties to the session receive said QoS information.
- 25 14. Process as claimed in claim 13 wherein at least one of the endpoints is a server for providing a telecommunications service.
15. Process as claimed in claim 13 wherein QoS information relating to signalling transactions  
30 is included in a message used in set-up of the session.
16. Process as claimed in claim 13 wherein QoS information relating to transmission of a media data stream during the session is included in a protocol definition unit used in teardown of the session.
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17. A process as claimed in claim 13 including processing QoS data measured within the end user terminal and/or extracted from received messages to produce displayable QoS parameters and displaying said parameters to a user via a user interface.

5 18. An end user terminal comprising means to monitor QoS by:

- establishing a session between a first session endpoint and a second session endpoint via a signaling plane;
- measuring the quality of service of the communication and/or the related signalling;
- transmitting QoS information representative of said measured quality of service in the header of

10 the messages used in set-up or teardown of the session, so that all parties to the session receive said QoS information.

19. An end user terminal as claimed in claim 18 wherein QoS information relating to signalling transactions is included in a message used in set-up of the session.

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20. An end user terminal as claimed in claim 18 wherein QoS information relating to transmission of a media data stream during the session is included in a protocol definition unit used in teardown of the session.

20 21. An end user terminal as claimed in claim 18 including means for processing QoS data measured within the end user terminal and/or extracted from received messages to produce displayable QoS parameters and displaying said parameters to a user via a user interface.

22. A computer program product comprising program code elements for monitoring QoS using

25 a process comprising

- establishing a session between a first session endpoint and a second session endpoint via a signaling plane;
- measuring the quality of service of the communication and/or the related signalling; and
- transmitting QoS information representative of said measured quality of service in the header of the

30 messages used in set-up or teardown of the session, so that all parties to the session receive said QoS information.

23. A computer program product as claimed in claim 22 in the form of a server for providing a telecommunications service.

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24. A computer program products as claimed in claim 22 wherein QoS information relating to signalling transactions in included in a message used in set-up of the session.
25. A computer program product as claimed in claim 22 wherein QoS information relating to transmission of a media data stream during the session is included in a protocol definition unit used in teardown of the session.
26. A computer program product as claimed in claim 22 including means for processing QoS data measured within the end user terminal and/or extracted from received messages to produce displayable QoS parameters and displaying said parameters to a user via a user interface.
27. A process for monitoring the quality of service of a communication through a communication network, said process being executed in a proxy server and comprising the steps of: extracting QoS information representative of measured quality of service measured at one or more session endpoints from the headers of one or more messages used in set-up or teardown of a session; processing said extracted QoS data to produce displayable QoS parameters and displaying said parameters to a user via a user interface.
28. A proxy server comprising means to monitor QoS by: extracting QoS information representative of measured quality of service measured at one or more session endpoints from the headers of one or more messages used in set-up or teardown of a session; processing said extracted QoS data to produce displayable QoS parameters and displaying said parameters to a user via a user interface.
29. A computer program product comprising program code elements for monitoring QoS by extracting QoS information representative of measured quality of service measured at one or more session endpoints from the headers of one or more messages used in set-up or teardown of a session; processing said extracted QoS data to produce displayable QoS parameters and displaying said parameters to a user via a user interface.
30. Process for monitoring the quality of service of a communication through a communication network, said process being executed in a end-user terminal and comprising the steps of:
- establishing a session between a first end-user terminal and a second end-user terminal via a signaling plane using a session initiation protocol;
  - monitoring the quality of service of the communication during said session;

- transmitting information representative of said quality of service during said session using said signaling plane, wherein the QoS information is transmitted within the header of a session initiation protocol message, so that all parties share the same information, and further wherein said session is used for transmitting voice services through at least a first and a second proxy and that said QoS
- 5 information include a parameter representative of the time taken between one invite is transmitted to said first proxy and said proxy forwards it to said second proxy.